

# MFS

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## Magnetic Ferroresonant Stand-Alone Safety Interlock Switch

- Tamper resistant—the combination of magnetic and ferroresonant signals required to close the safety contacts makes the MFS very tamper resistant
- Stand-alone—use for lower risk applications as a stand-alone safety switch allowing direct switching of relays and contactors up to 2 A at 230 VAC
- MFS-11 provides a visible LED which illuminates green when the actuator is in range and contacts are closed
- MFS-12 provides a dual color LED indicator. The LED illuminates green when the actuator is in range and the contacts are closed. The LED illuminates Red when the actuator is out of range and contacts are open.
- Compact size—mounts easily on 1-in. square tubing
- Use with safety monitoring relays in applications requiring a higher level of safety reliability
- NEMA 4 enclosure enables water washdown cleaning
- A Rapid Delivery Product: Select models are available for shipment today or within 3 to 5 days



Conforms to EN1088, EN292, EN60204-1, EN954-1, EN947-5-3, EN60947-5-1, EN50081, EN50082, EN61000-6-2  
UL and C-UL listed



## Specifications

Electrical	MFS-11	MFS-12
Power Supply:	24 VDC	
Power Consumption:	2 VA	
Max Cable Length:	100 m	
Safety Outputs:	1 N/C or 2 N/C	2 N/C
Auxiliary Contact:		1 N/O
Operating Distance:	ON = 6-9 mm; OFF = 10-12 mm	
Minimum Gap:	2 mm	
Safety Max Switched Current/Voltage:	2 A / 230 VAC; 2 A / 30 VDC	
Aux. Max. Switched Current/Voltage:	2 A / 230 VAC; 2 A / 30 VDC	
Max. Output Fuse:	2 A quick acting	
<b>Mechanical</b>		
Mounting:	2 x M4 screws, supplied	
Case Material:	ABS	
Weight:	198 g (7 oz.)	
Color:	Blue	
Indication:	Green = Guard Closed	Green = Guard Closed Red = Guard Open
Mechanical Life:	10 x 10 <sup>6</sup>	
<b>Environmental</b>		
Protection:	IP67	
Operating Temperature:	-10 to 55°C (-14 to 131°F)	
Vibration/Shock:	50-100 Hz / 10 g	
<b>Compliance</b>		
Standards:	EN1088, EN292, EN60204-1, EN954-1, EN947-5-3, EN60947-5-1, EN50081, EN50082, EN61000-6-2	
Approvals/Listings:	CE marked for all applicable directives, UL and C-UL	
Safety Category:	Cat. 3 per EN954-1 when used with an appropriate safety monitoring relay	

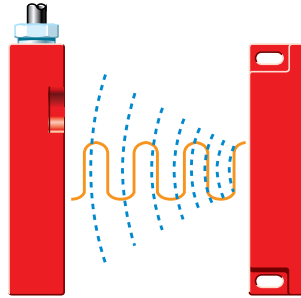
Specifications are subject to change without notice.

Note: The safety contacts of the STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

## Operation

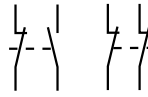
### Operating Principle

On presenting the actuator to the switch, the high intensity magnetic field, together with a resonant frequency signal, causes the contacts to close. On removing the actuator (opening the door), the safety contacts open, isolating the machine. The required combination of magnetic and ferroresonant signals makes the MFS very tamper resistant.



### Contact Arrangements

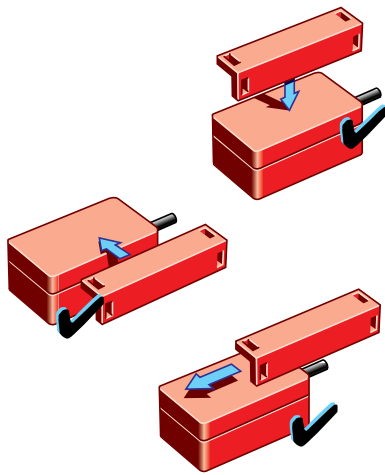
MFS-11



MFS-12



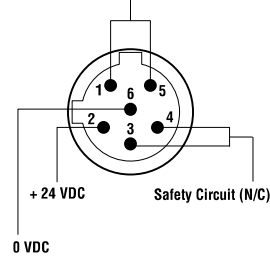
### Mounting Examples



### Connector Configurations

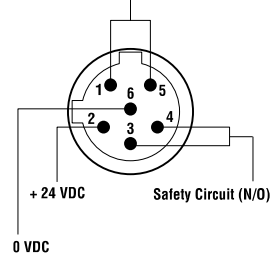
MFS-11P11

6-pin Dual Keyway Micro Style 1/2"-20  
Safety Circuit (N/O)



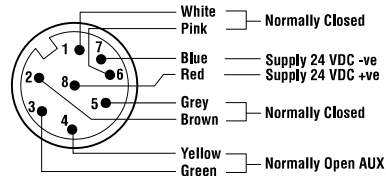
MFS-11P20

6-pin Dual Keyway Micro Style 1/2"-20  
Safety Circuit (N/O)



MFS-12

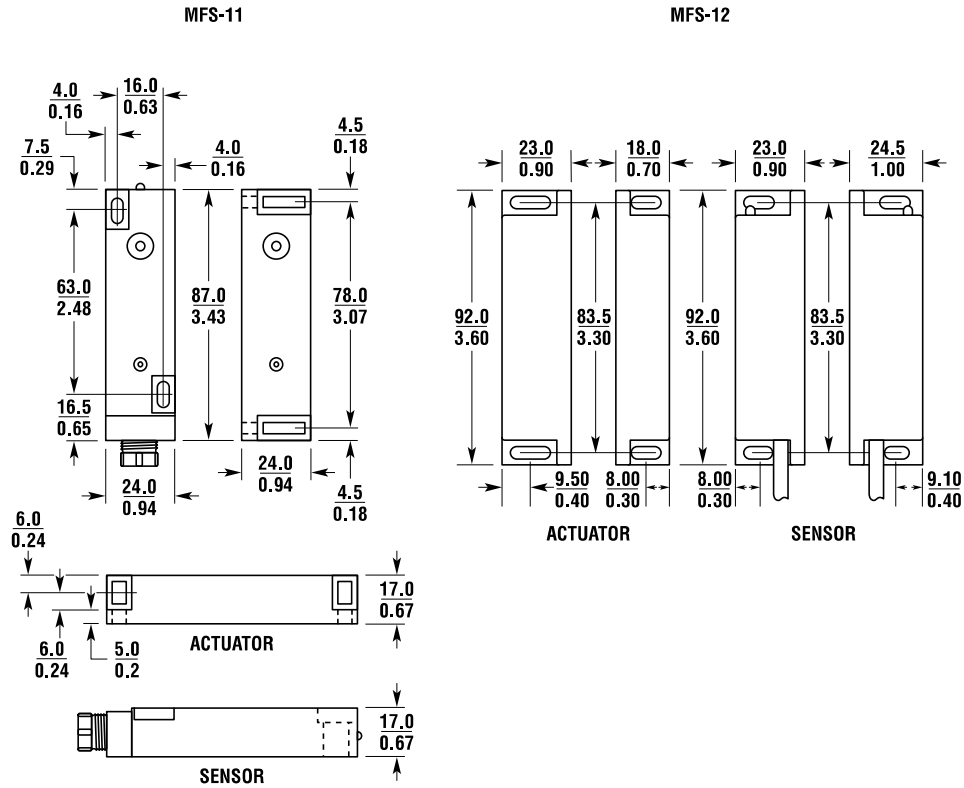
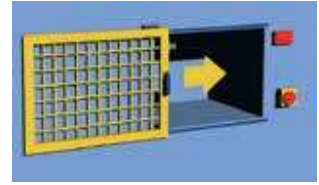
8-pin Single Keyway Micro Style  
M12 Connector



Dimensions

(mm/in.) Applications

Typical applications are on sliding guard doors or swinging guard doors.



Ordering

Model	Contacts	Wiring Entry	Part No.
MFS-11P11C3	1 N/C + 1 N/O	3 m cable	44508-1120
MFS-11P11C6	1 N/C + 1 N/O	6 m cable	44508-1121
MFS-11P11C10	1 N/C + 1 N/O	10 m cable	44508-1122
MFS-11P11CC	1 N/C + 1 N/O	Connector, 6 pin dual keyway micro style 1/2"-20	44508-1129
MFS-11P11CC5	1 N/C + 1 N/O	Connector, 6 pin dual keyway micro style 1/2"-20 + 5 m cable	44508-1128
MFS-11P20C3	2 N/C	3 m cable	44508-1130
MFS-11P20C6	2 N/C	6 m cable	44508-1131
MFS-11P20C10	2 N/C	10 m cable	44508-1132
MFS-11P20CC	2 N/C	Connector, 6 pin dual keyway micro style 1/2"-20	44508-1139
MFS-11P20CC5	2 N/C	Connector, 6 pin dual keyway micro style 1/2"-20 + 5 m cable	44508-1138
MFS-12P21C6	2N/C + 1N/O	6 m cable	44508-1133
MFS-12P21CC5	2N/C + 1N/O	Connector, 8 pin single keyway M12 + 5m cable	44508-1134
SA08-MFS11, Spare Actuator for MFS-11			44508-0711
SA08-MFS12, Spare Actuator for MFS-12			44508-0712

Universal Mounting Brackets can be used with this product.

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